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1-14. (CANCELED)

15. (CURRENTLY AMENDED) A method for determining a rotation speed and a rotation direction of a component (2)~~, in particular a transmission output shaft, with~~ via a sensor device (1), ~~in which~~ the method comprising the steps of:

generating a first sensor signal (I) and a second sensor signal (II) ~~are generated~~ as a function of a rotational speed and a rotational direction of the component (2), with the first and second sensor signals being phase shifted relative to one another ~~and which,~~ ;

triggering a switching signal in the sensor device (1) whenever the first and second sensor signals reach one of an upper switching threshold (s_o) or a lower switching threshold (s_u)~~, trigger a switching signal in the sensor device (1),~~ such that when~~ever there are~~ alternating and consecutive switching signals of the first and second sensor signals (I, II) are present, a pulse signal is ~~emitted~~ generated as a function of consecutive first and second sensor signals (I, II) and ~~which a variation of a sensor output signal is generated~~ used to determine a rotational speed of the component~~, wherein~~ ; and

only generating a pulse signal of the sensor device (1) after [[when]] the component (2) reverses rotational direction ~~a pulse signal of the sensor device (1) is only generated when a rotation movement of the component (2) is recognized,~~ with the rotation movement of the component (2) in the reverse direction being ~~sensed~~ only recognized once ~~when, in alternation,~~ a switching signal of one of the first and second sensor signals (I[[,]] or II) ~~and after it~~ is consecutively followed by a switching signal of the other first and second sensor signals (II or I) ~~occur~~ which is then followed by a second switching signal of the one of the first and second sensor signals (I or II) which is then followed by a second switching signal of the other first and second sensor signals (II or I).

16. (CURRENTLY AMENDED) The method according to claim 15, ~~wherein~~ further comprising the steps of determining a rotational direction reversal of the component (2) ~~is characterized by~~ when two consecutive switching signals of one of the first and second sensor signals (I or II) occurs without any switching signal of the ~~respective~~ other of the second and first sensor signals (II or I) occurring ~~in the time interval~~ between [[them]] the two consecutive switching signals.

17. (CURRENTLY AMENDED) The method according to claim 15, ~~wherein~~ further comprising the steps of generating the first and second sensor signals (I, II) so as to have continuous, at least approximately sinusoidal variations.

18. (CURRENTLY AMENDED) The method according to claim 17, ~~wherein~~ further comprising the steps of varying an amplitude of the sensor signals (I, II) ~~varies~~ as a function of a distance (LS) between the sensor device (1) and an area of the component (2) sensed by the sensor device (1).

19. (CURRENTLY AMENDED) The method according to claim 15, ~~wherein~~ further comprising the steps of generating from the pulse signals ~~generate~~ a rectangular variation of the sensor output signal of the sensor device (1), such that a width of the rectangle corresponds to a pulse width (t_pb), a distance between two switching signals of the first and second sensor signals (I, II) each generating a rectangular signal corresponds to a period duration (t_pd), and a height of the rectangles corresponds to a pulse height.

20. (CURRENTLY AMENDED) The method according to claim 19, ~~wherein~~ further comprising the step of assigning a predefined value ~~is assigned~~ to the pulse width (t_pb).

21. (CURRENTLY AMENDED) The method according to claim 19, ~~wherein~~ further comprising the step of assigning a respective predefined value (t_pb_v, t_pb_r) to the pulse width (t_pb) for each of the two rotational directions of the component (2)~~,~~ ~~a respective predefined value (t_pb_v, t_pb_r) is assigned to the pulse width (t_pb)~~.

22. (CURRENTLY AMENDED) The method according to claim 19, ~~wherein~~ further comprising the step of varying the pulse width (t_pb) ~~varies~~ as a function of the rotational speed of the component (2).

23. (CURRENTLY AMENDED) The method according to claim 19, ~~wherein~~ further comprising the step of varying the period duration (t_pd) ~~varies~~ as a function of a rotational speed of the component (2).

24. (CURRENTLY AMENDED) The method according to claim 19, ~~wherein~~ further comprising the step of respectively assigning to the pulse height ~~is assigned, respectively,~~ a predefined value (low, high_v, high_r) associated with one of the two rotational directions of the component.

25. (CURRENTLY AMENDED) The method according to claim 19, ~~wherein~~ further comprising the step of assigning to the pulse height ~~is assigned~~ a predefined

value (low, high) which is independent of the rotational speed and direction of the component.

26. (CURRENTLY AMENDED) The method according to claim 15, ~~wherein~~ further comprising the step of varying at least one of the upper switching threshold (s_o) and the lower switching threshold (s_u) ~~preferably~~ as a function of [[the]] a distance (LS) between the sensor device (1) and ~~the area (3) of~~ the component (2) sensed during the operation of the sensor device (1).

27. (CURRENTLY AMENDED) The method according to claim 15, ~~wherein~~ further comprising the step of arranging the upper switching threshold (s_o) and the lower switching threshold (s_u) ~~are arranged~~ at least approximately symmetrically about a zero transition of the sensor signals of the sensor device.

28. (CURRENTLY AMENDED) The method according to claim 15, ~~wherein~~ further comprising the step of amounting the phase shift of the sensor signals of the sensor device (1) during a rotation of the component (2) ~~amounts~~ to at least approximately to pi/2.

29. (CURRENTLY AMENDED) A method for determining a rotational speed and a rotational direction of a component (2)~~, in particular a transmission output shaft,~~ ~~with~~ via a sensor device (1), the method comprising the steps of[[:]]:

generating a first sensor signal (I) as a function of a rotational speed and a second sensor signal (II) as a function of rotational direction of the component (2)[[,]];

phase shifting the first and second sensor signals relative to one another;

triggering a switching signal in the sensor device (1) whenever the first and second sensor signals reach one of an upper switching threshold (s_o) or a lower switching threshold (s_u)~~;~~

~~triggering a switching signal in the sensor device (1),~~ such that when there are alternating and consecutive switching signals of the first and second sensor signals (I, II), a pulse signal is ~~emitted~~ generated as a function of consecutive first and second sensor signals (I, II) and ~~which variation of a sensor output signal is generated, which is~~ used to determine a rotational speed of the component; and

generating only a pulse signal of the sensor device (1) when the component (2) reverses rotational direction ~~when a rotational movement of the component (2) is recognized,~~ and the rotational movement of the component (2) being sensed when~~, in alternation,~~ a switching signal of one of the first and second sensor

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signals (I[[,]] or II) ~~and after it~~ is consecutively followed by a switching signal of the other first and second sensor signals (II or I) ~~occur~~ which is then followed by a second switching signal of the one of the first and second sensor signals (I or II) which is then followed by a second switching signal of the other first and second sensor signals (II or I).

30. (NEW) A method for determining a rotational speed and a rotational direction of a component (2) via a sensor device (1), the method comprising the steps of:

generating a first sensor signal (I) as a function of a rotational speed and a second sensor signal (II) as a function of rotational direction of the component (2);

phase shifting the first and second sensor signals relative to one another;

triggering a switching signal in the sensor device (1) whenever either of the first and second sensor signals reach one of an upper switching threshold (s_o) or a lower switching threshold (s_u) such that when alternating and consecutive switching signals of the first and second sensor signals (I, II) occur, generating a pulse signal as a function of the consecutive first and second sensor signals (I, II) and determining a rotational speed of the component from the generated pulse signals; and

only generating a pulse signal of the sensor device (1), following reversal of the rotational direction of the component (2), once rotation of the component (2) in the reversed rotational direction is recognized by a first switching signal of one of the first and second sensor signals (I or II) which is consecutively followed by a first switching signal of the other first and second sensor signals (II or I) which is then followed by a second switching signal of the one of the first and second sensor signals (I or II) which is then followed by a second switching signal of the other first and second sensor signals (II or I).